Veilux NVR User's Manual

(Version 1.0.18)

Introduction

Thank you for purchasing Veilux's NVR.

NVR program connects to network video servers (up to 16 channels) and enables you to record live video, search through recorded files and play them. Moreover, NVR performs various control functions such as camera PTZ, preset, and relay on/off. NVR is more enhanced system focused on live video transmission on network. With NVR, you can use all functions of DVR wherever you are.

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Feature

- **Monitoring**
  - 16 channel video inputs
  - 4,6,8,9,16 screen display at user's option
  - Expanded & contracted views / Auto Change Screen Display
- **Recording**
  - Force Recording: Record whenever you want manually.
  - Recording by sensor detection: Recorded automatically when sensor activates.
  - Recording by motion detection: Recorded automatically when motion is detected.
  - Recording by scheduling: Recorded automatically according to the one week scheduling time table users set.
- **Searching**
  - Search through recorded files by date, time and recording method.
- **Playback**
  - Playback recorded files.
- **Camera Controlling**
  - Control camera Pan/Tilt/Zoom. (This feature is only available in some PTZ cameras.)
  - Support pre-defined camera move.
- **Relay Controlling**
  - Control various electronic devices by relay output

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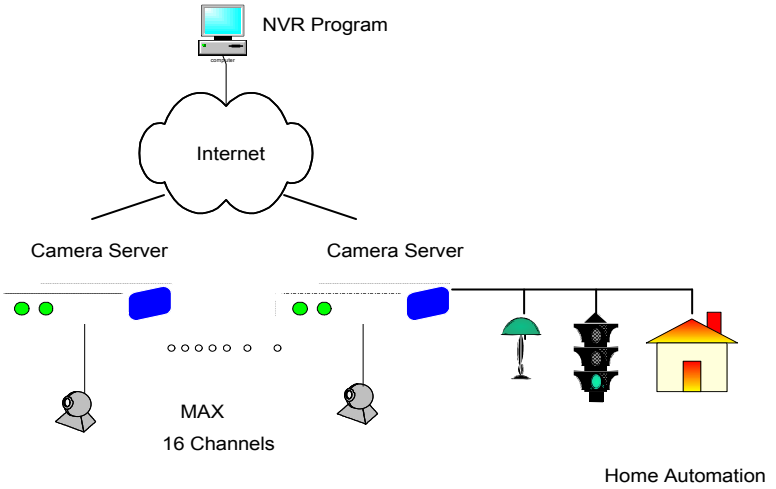
1. Overview

Veilux's NVR software enhances the performance of camera server and enables users to use it in an easier way. NVR optimizes DVR system to fit network environment. DVR focuses mainly on storing video files in its storage so that its live videos and recorded files cannot be transmitted appropriately on network. Veilux's NVR eliminates such an inconvenient element as storage space limitations. NVR provides multiple screen displays, 24 hour reliable record, playback and advanced search by separating web server for network transmission from file storage. NVR is video recording system based on network environment, thus, users can easily operate NVR software once they first install web camera on network and have basic understandings on network system.



2. Prior to Installation

2.1. Glossary

- **Network**: Network is defined in various meanings, but used in three different meanings here.

  1. Network connected to Internet: You can connect to camera server not only by IP address but also MAC address.

  2. Closed private network or local network using IP share devices: You can connect to camera server by IP address.

  3. The case that camera server directly connects to monitoring computer: You can connect to camera server by its default private IP address.

- **IP Address**: An identifier for a computer or device on a TCP/IP network. Networks using the TCP/IP protocol route messages based on the IP address of the destination. The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be zero to 255. For example, 1.160.10.240 could be an IP address.
- **MAC Address**: In a local area network (LAN) or other network, the MAC (Media Access Control) address is your computer's unique hardware number. When you're connected to the Internet from your computer, a correspondence table relates your IP address to your computer's physical (MAC) address on the LAN.
- **Port Number**: A port number is a way to identify a specific process to which an Internet or other network message is to be forwarded when it arrives at a server. Each program employs port number. Defined port numbers are used for basic programs; Telnet 30, HTTP 80, etc.
- **Server**: In the client/server programming model, a server is a program that awaits and fulfills requests from client programs in the same or other computers. A given application in a computer may function as a client with requests for services from other programs and also as a *server* of requests from other programs.
- **Setup**: Configuration of display, recording, schedule and directory of recorded files can be set up on NVR

  Recording: NVR records video in MPEG4 format transmitted from camera server.
- **Motion detection**: NVR system automatically records the events when some motion is detected.
- **Sensor detection**: NVR system automatically records the events when sensors

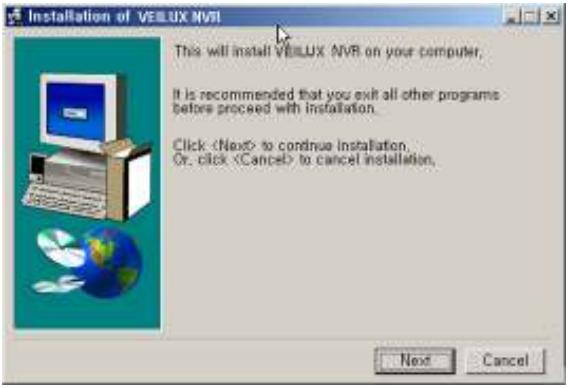
detect. Sensor is mainly used in security system for its various kind and reliability.

- **Capture**: NVR system capture a still image from video. Capturing is similar to taking a picture.
- **Schedule**: You can set up the schedule of force recording, sensor recording and motion recording because you cannot always monitor. When the scheduled time is up, video is automatically recorded.
- **Directory**: Directory is the folder that store recorded files. Normally, recorded files are stored in the hard disc of your computer that NVR is installed. You should designate new directory if you add new hard disc in your computer to expand storage space.
- **I Frame**: Video compressed in MPEG-4 is composed of lots of frames. I Frame represents a complete picture itself not referring to previous or next frame. You see I Frame when you view a still view through searching function.
- **Relay**: Relay is used to control various electronic devices. It functions as a switch to control ON/OFF on electronic devices.
- **Pan**: Controlling camera movement horizontally. Panning angle range varies up to 360°
- **Tilt:** Controlling camera movement vertically. Tilting angle range varies.
- **Zoom**: Zooming camera enables you to view distant scene by magnifying. Zoom control function is not applied to some models.
- **Preset**: PTZ-capable cameras use preset position. You can set camera movement to where you want to view. You don't need to control camera PTZ manually.
- **Private IP:** Private IP should not be used on the Internet. This is only used on local network.
- **Universal IP:** Universal IP having sole IP address is used on the Internet.

3. Program Installation

Run "Setup.exe" file to install NVR program.

3.1. Program Installation

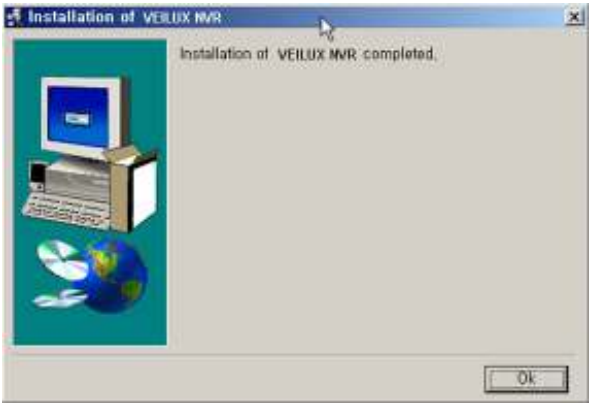

Installation of VEILUX NVR
This will install VEILUX NVR on your computer.
It is recommended that you exit all other programs before proceed with installation.
Click <Next> to continue installation.
Or, click <Cancel> to cancel installation.
Next
Cancel

- After you run "MPEG4 NVR.exe," installation procedure starts as the figure above.
- Click "Next" to move on to the next step

Installation of VEILUX NVR - Select install folder
VEILUX NVR will be installed to following folder.
Click <Install> to begin installation to following folder.
To install to a different folder, Either enter install path.
Or, click <Browse> and select another folder.
Space needed: 8,459KBytes
Install folder
C:\Program Files\VEILUX NVR
Browse
Install
Cancel

- Click "Next" to continue to install the program.

■ The program is being installed.



■ Click "Finish" to complete installation.

1.1. Running NVR Program

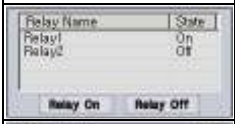
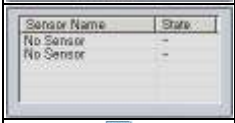
- When you complete installation, "MPEG4 NVR" icon is created on your desktop. Double-click the icon to run the program.

- You can also run the program under **I Start I Program I VEILUX NVR I VEILUX NVR I**

4. NVR Viewer User Interface

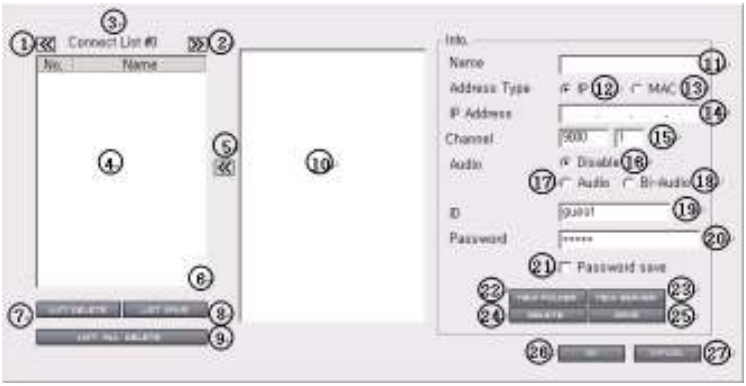
4.1. NVR Viewer

		Indicate date and time of user's system.
	CH	Indicate channel number
	Server Name	Indicate server name
	State	Indicate the name of connected server.
		Click this button when you need one-way audio connection.
		Click this button when you need two-way audio connection.
		Check this checkbox when you control one channel.
		Check this checkbox when you control all channel.
		Control video file play.
		Record video from connected server.
		Play
		Play 2X
		Pause
		Stop
		Open file menu window.
		Capture still images.
		Connect server.
		Disconnect server.
		Open server list menu window.
		Open general setup menu window.
		To open system setup menu window.
		To exit NVR program.
		Record all channels.
		Capture all channels.
		Indicate selected channel number.
		To use PTZ.
		To use Relay.
		To use Preset.

	Sensor	To use Sensor
		To control P/T of cameras (Pan/Tilt is controlled just by clicking on Screen, or clicking Direction Key on Keyboard)
		Automatic Pan/Tilt
		Control PTZ speed.
		Zoom In, Zoom Out.
		Focus Near, Focus Far.
	Relay On	To activate each relay name selected from the list.
	Relay Off	To deactivate each relay name selected from the list.
	TOUR	Double-click each preset name from the list to change camera view pre-defined by user. Click "TOUR" button to see all the preset camera views by turns at regular intervals.
		Sensor Name List Box. When sensor activated, "Sensoring" displays in the "State" field.
4		4CH Screen Display.
6		6CH Screen Display.
8		8CH Screen Display.
9		9CH Screen Display.
16		16CH Screen Display.
		Auto Change Screen Display
		Ring the bell. (S-152)
BEEP OFF		To turn off beep sound.

5. Menu Description

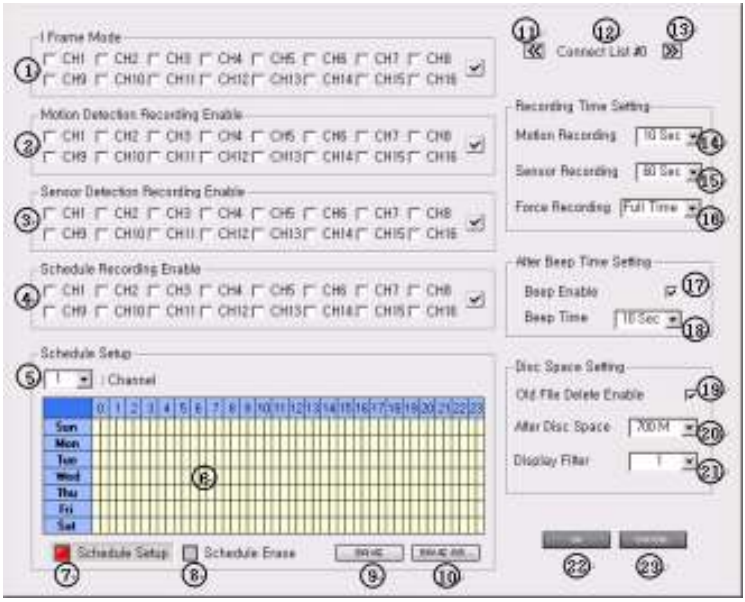
5.1. Connect Menu



NO	Description
1	To see the previous connect list.
2	To see the next connect list.
3	Connect List Name
4	Display connected server list.
5	Click this button to move from server list to connected server list.
6	To re-connect to a server in case of being disconnected.
7	To delete selected server list from connected server list.
8	To save connected server list.
9	To delete all the connected lists.
10	Display server list.
11	Display server name.
12	To address IP type.
13	To address MAC type.
14	Enter either IP or MAC address.
15	Enter port number for IP address or channel number for MAC address.
16	Audio Disable

17	One-way Audio
18	Two-way
19	Enter user ID.
20	Enter user password.
21	Check "Password save" checkbox to save password as file.
22	To create a new folder.
23	To add a new server
24	To delete a selected server or server.
25	To save configuration.
26	To apply configuration and close "Connection Menu" windows.
27	To cancel configuration and close "Connection Menu" windows.

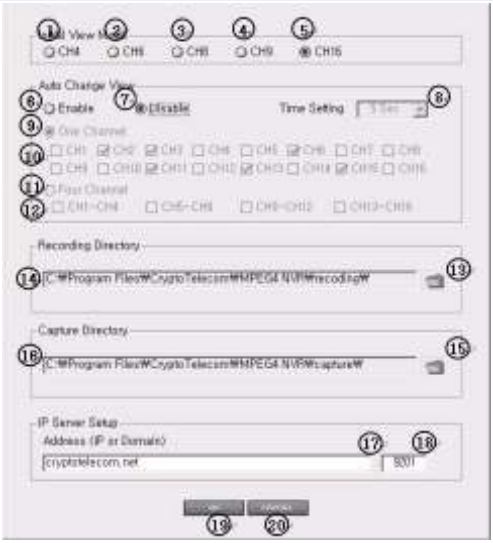
5.2. General Setup Menu



NO	Description
1	Check desired checkboxes to see I frame mode display.
2	Check desired checkboxes to enable motion detection recording.
3	Check desired checkboxes to enable sensor detection recording.

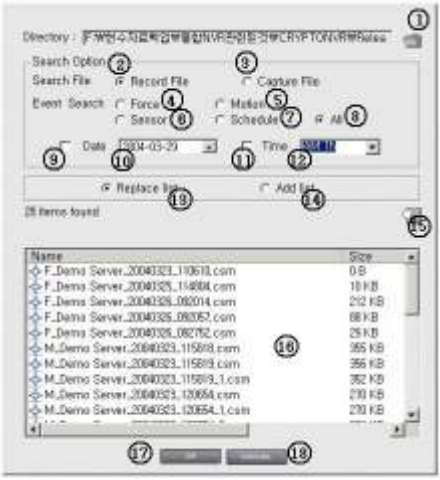
4	Check desired checkboxes to enable schedule recording.
5	To select a channel from the drop-down list Setup.
6	To appoint schedule recording time.
7	Click this button to set up schedule recording.
8	Click this button to schedule recording.
9	To save appointed schedule recording time.
10	To save schedule recording time on pop-up menu by right-clicking.
11	To see the previous connect server list.
12	Display connect list name.
13	To see the next connect server list.
14	To select motion recording time from the drop-down list.
15	To select sensor recording time from the drop-down list.
16	To select force recording time from the drop-down list.
17	To check "Beep enable" checkbox to go off beep sound when events occur.
18	To select beep sound time from the drop-down list
19	Check this check box to enable disc alarm message.
20	To select disk volume for disk alarm message from the drop-down list.
21	To select display filter from the drop-down list.
21	Apply and save configuration.
22	Close general setup menu window.

5.3. System Menu



NO	Description
1	4 Channel Screen Display
2	6 Channel Screen Display
3	8 Channel Screen Display
4	9 Channel Screen Display
5	16 Channel Screen Display
6	Check this checkbox to enable auto change view
7	Check this checkbox to disable auto change view
8	To select auto change view time from the drop-down list.
9	Check this checkbox to select one channel audio change.
10	Check desired checkboxes to enable audio change.
11	Check this checkbox to select four channel auto changes.
12	Check desired checkboxes to enable four channel auto changes.
13	Click this button to designate a recording folder.
14	Display a recording directory.
15	Click this button to designate a capture folder.
16	Display a capture directory.
17	Enter IP server address for MAC address type.
18	Enter port number of IP server address.
19	Save configuration and close system menu window.
20	Cancel configuration and close system menu window.

5.4. File Menu



NO	Description
1	Select a directory that desired files are saved.
2	Check this checkbox to find recording files.
3	Check this checkbox to find capture files.
4	Check this checkbox to find force recording files.
5	Check this checkbox to find motion recording files.
6	Check this checkbox to find sensor recording files.
7	Check this checkbox to find schedule recording files.
8	Check this checkbox to find all recording files and capture files.
9	Check this checkbox to find files by date.
10	Select date when files are created.
11	Check this checkbox to find files by time.
12	Select time when files are created.
13	Check this checkbox to delete file list and to find new files.
14	Check this checkbox to find additional files and to add them to existing file list.
15	Click to find files.
16	Display files.
17	Play a selected file.
18	Close file menu window.

5.5. Pop-up Menu

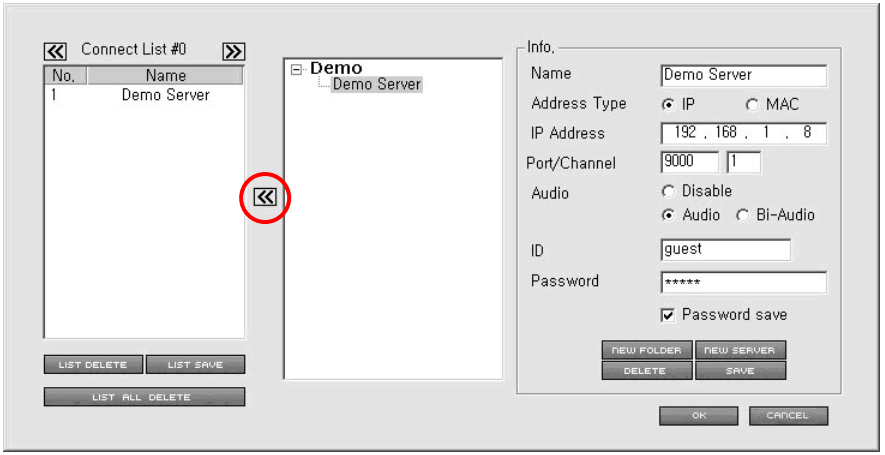
NO	Description
1	Connect a selected server.
2	Disconnect a selected server.
3	Record or stop recording.
4	Open file menu window.
5	Capture a still image.
6	Full-sized View.
7	Open connection menu window.
8	Open general setup menu window.
9	Open system menu window.
10	Open administrator's webpage.

6. How To Use

6.1. Connect & Disconnect

6.1.1. Connect

- Click "Server List" icon as in the above figure and connection menu window opens.



- Click [NEW SERVER] button, add new server to the connect list and save the configuration.
- Enter IP address for IP address type after checking "IP" radio button. Enter MAC address for MAC address type after checking "MAC" radio button.
  IP Address Type: Select when you use Universal IP. (You can use private IP when you connect to local network)
  MAC Address Type: Select when you use Private IP. (VEILUX server's MAC address is used.)
- Click "⏪" button and server list is added to Connect List. Click [LIST SAVE] and [OK] button.

■ Click [Connect] button when you want to connect.
- [ONE CH MODE]: Connect one selected channel.
- [ALL CH MODE]: Connect all channels.

6.1.2. Disconnect

■ Click [DisConnect] button when you want to disconnect.
- [ONE CH MODE]: Disconnect one selected channel.
- [ALL CH MODE]: Disconnect all channels.

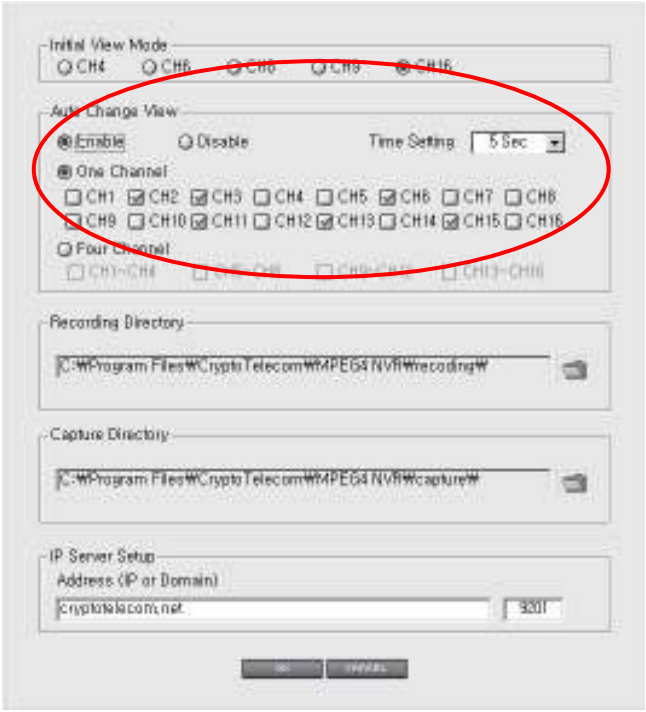
6.2. Display View

- [16] Channel Display View

- [6] Channel Display View
- Selecting an area of the image by left-clicking and drag & drop.

6.3. Auto Change Channel Display

- Click [System Setup] button and system menu window opens.

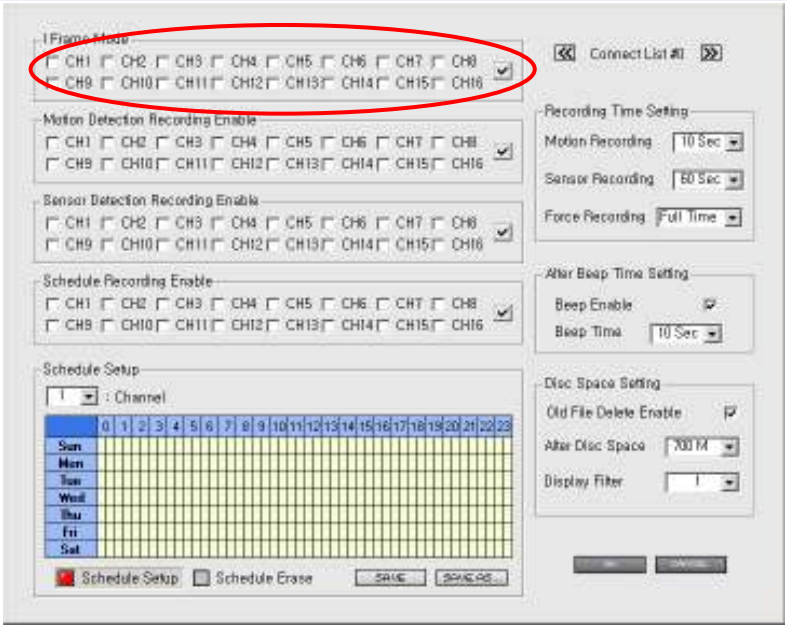


- When you set up "Auto Chang View" shown in the figure above, each 2/ 3/ 6/11/13/15 channel is shown on one screen display by turns at 5-second intervals.
- Check [Four Channel] radio button when you want to use 4 screen display mode.
- Set up as above and click [OK] button.

- Click " " icon and the icon color turns red. You can each channel by turns on the display at 5-second intervals.

6.4. I Frame Mode Display

- Click [General Setup] button and general set up menu opens.



- Set up "I Frame Mode" shown in the figure above and click [OK] button. (Set up each channel as "I Frame mode" display to reduce the amount of processor power.

6.5. PTZ / Relay / Preset / Sensor Control

- Click [PTZ] to control camera PTZ.
- You can also control camera PTZ by keyboard or Zoom In(+)/Zoom Out(-) and Focus Near(N)/Focus Far(F) buttons.

- Click [Relay] to control relay.

- Click [Preset] to apply user-predefined camera views.

- When "Beep Enabled" checkbox is checked on general setup menu, "Sensoring" is displayed on the "State" field. This informs you how many events occurred.
  (Refer to 6.7 Activate Event Beep Sound)

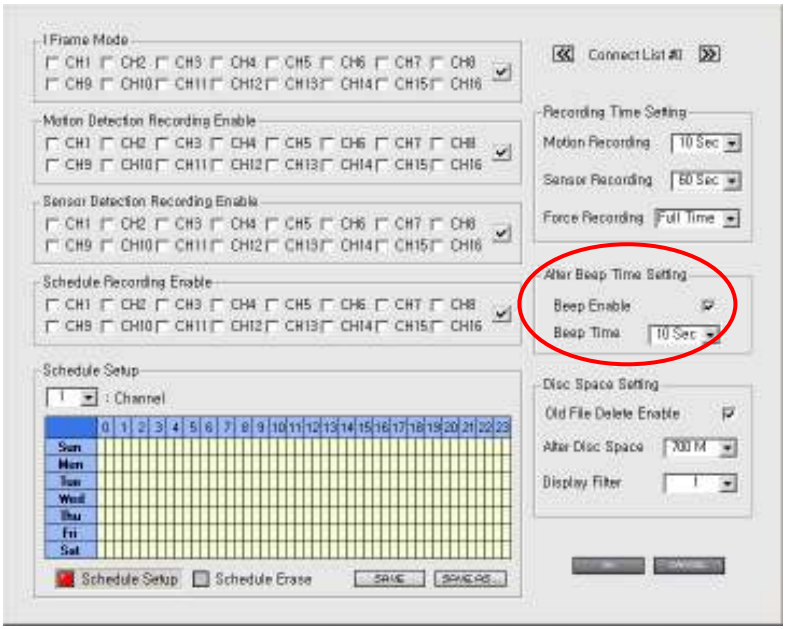
6.6. Screen Capture

- Select channel you want to capture.

- Capture completed when you click the icon shown in the above figure.
- Screen is captured by the two modes; [ONE CH MODE] and [ALL CH MODE]
  Checking [ONE CH MODE] radio button, you capture only one channel's screen. When you select [ALL CH MODE], you can capture all the connected channels you selected. (The channels you select turn blue shown in the figure above.)

6.7. Activate Event Beep Sound

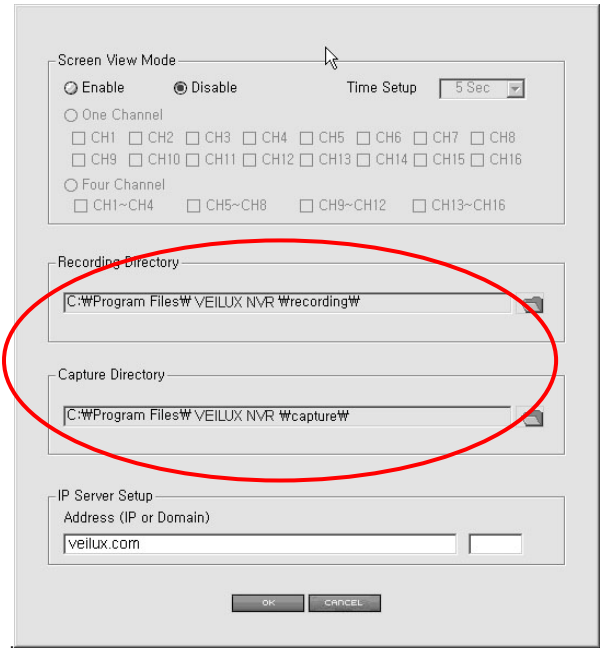
- Click [General Setup] button and general set up menu opens as below.



- Check [Beep Enable] checkbox, set beep time. Then, click [OK] to save and exit.
- When sensor or motion detects, display view flashes and beep sounds
- For sensor detection, display view flashes in yellow. For motion detection, flashes in white.
- Click "BEEP OFF" button to stop beep sound.

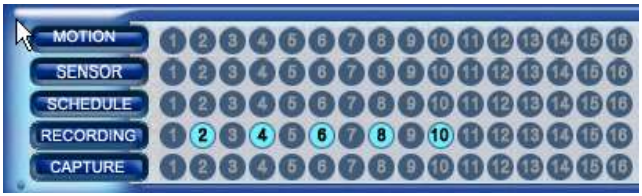
6.8. Recording & Capture Directory Setup

- Click [System Setup] button and system setup menu window opens as below.



- [Recording Directory] and [Capture Directory] are designated for example as shown in the figure above.
- Click [OK] button to save and exit.

6.9. Force Recording

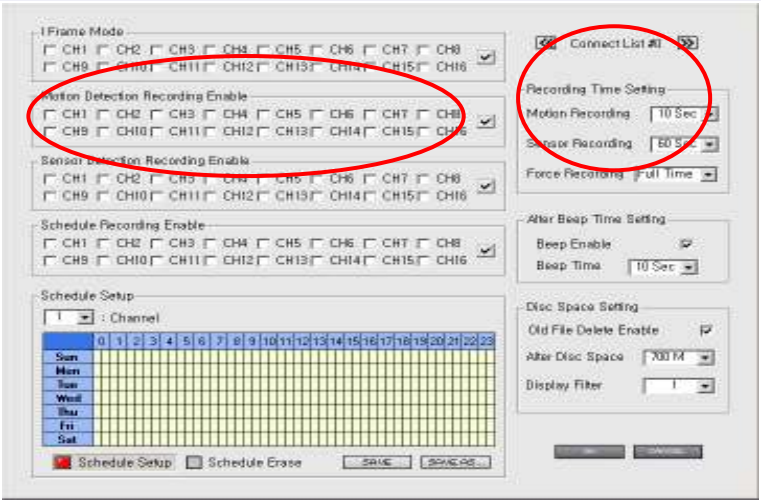


- Select channels you want to record.

- Recording starts when you click the icon and stops click it again shown in the above figure.
- Video is recorded by the two modes; [ONE CH MODE] and [ALL CH MODE]

6.10. Event Recording

- Click [General Setup] button and general setup menu window opens as below.



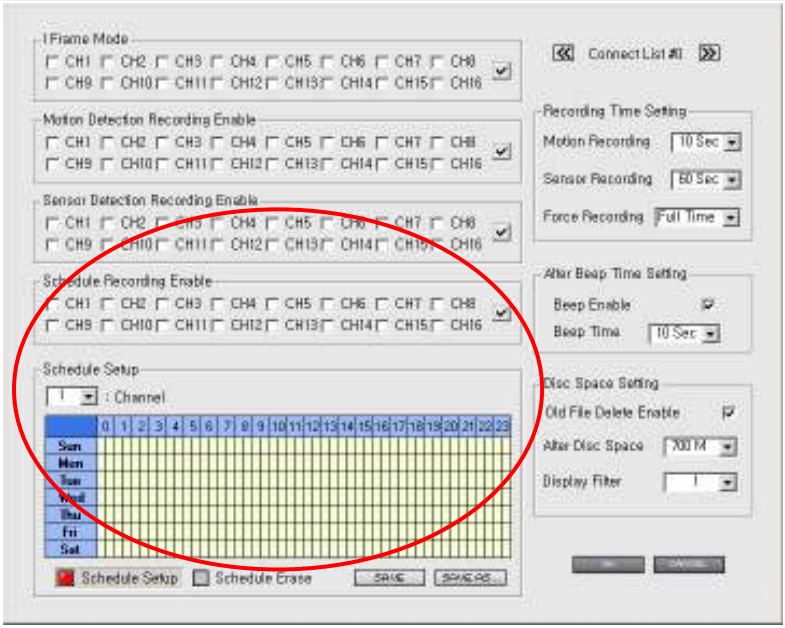
- Set up [Motion Detection Recording Enable] & [Sensor Detection Recording Enable] as shown in the figure above and Click [OK] to exit.

- Set up recoding time on [Recording Time Setting].

- The numbers of motion-detected channels turns red as shown in the figure above, recording the channels' videos. (On "force recording" mode, you can record for 20 minutes at one time.)

6.11. Schedule Recording

- Click [General Setup] button and general setup menu opens as below.



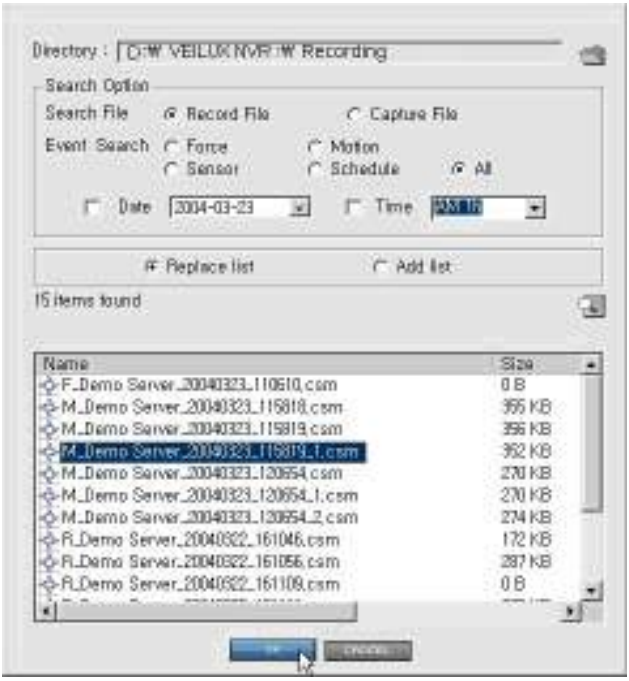
- Check [Schedule Recording Enable] checkboxes and click [SAVE].
- Select a channel from the drop-down list and set recording time & day by mouse-point dragging on the schedule table. Selected time & day fields turn red. And click [SAVE].
  - [Schedule Setup] : Display recording time & day fields in red.
  - [Schedule Erase] : Erase red color by deleting recording time & day fields.
  - [SAVE AS…] : Apply current schedule recording to other channels in the same way.
- Click [OK] button.

(Record processing status is shown in the figure above when No. 1 channel is selected and its scheduled time is up.)

- The number of selected channel turns red when their scheduled time is up. Recorded files are saved by 20-minute length.

6.12. Play Recorded / Captured Files

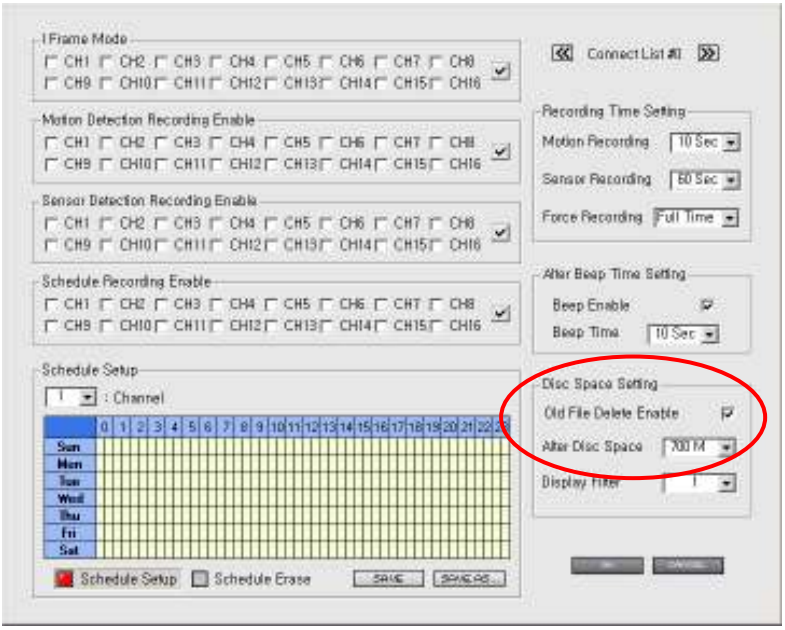
- Click the button as shown in the figure above, file menu window opens as below.



- Check "Record File" radio button at [Search Option] box. Search files and select a file you want to play. Click [OK] button to play the selected file.
- Check "Capture File" radio button at [Search Option] box. Search files and select a file you want to view. Click [OK] button to view the selected file.

6.13. Disc Space Setting

- Click [General Setup] button and general set up window opens blow.

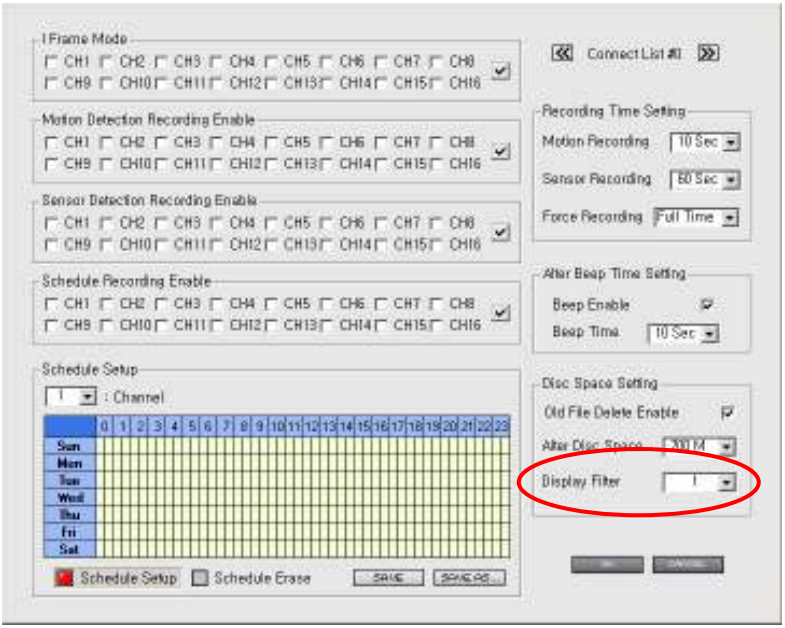


- Check "Old File Delete Enable" checkbox
  - Old files are deleted when "Alter Disc Space" exceeds your empty hard disc space.
  - You can keep recording when there is little empty space in your hard disk by deleting old files

- Uncheck "Old File Delete Enable" checkbox
  - You cannot record when "Alter Disc Space" exceeds your empty hard disc space.

6.14. Apply Display Filter

- Click [General Setup] button, and general setup menu window opens below.



- Select "Display Filter" from the drop-down list when picture on the display has noise. (Applied to only S-152)

7. Troubleshooting

7.1. Cannot record

- Check "Recording Directory" on [System Setup] menu window.
- This happens when you uncheck "Old File Delete Enable" and "Alter Disc Space" exceeds your empty hard disc space.

7.2. Cannot find recorded files

- Recorded files are deleted when you check "Old File Delete Enable" checkbox on [General Setup] and "Alter Disk Space" exceeds your empty hard disk space.

7.3. Cannot connect camera server

- When you fail to connect camera server, NVR keep trying to connect it for about 20 minutes. Click "DisConnect" button to disconnect server.

7.4. Display view does not flash and beep does not sound when events occur.

- [Refer to 6.7 Activate Event Beep]

7.5. Picture Flickering

- Picture flickers when your system is not efficient enough. Upgrade your system or replace VGA card.

Item	Minimum Required System	Recommended System
CPU	Pentium Ⅳ 2.0G	Pentium Ⅳ 2.4G or higher
Main Memory	256MB	512MB or higher
O/S	Windows 2000/XP	Windows 2000/XP
Web Browser	I.E 5.0	I.E 5.0 or later
Resolution	1,024 * 768	1,152 * 864
Network	100 Base-T Ethernet	100 Base-T Ethernet

8. Appendix

8.1. Required System

■ OS:

- Windows2000 Professional
- Windows2000 Server
- WindowsXP Home Adition
- WindowsXP Professional

■ Support Language

- (Korean, English, Japanese, and Chinese)

■ Network:

Leased line, Cable, xDSL, etc. (Recommended to use high-speed line for 16 channel screen display.)

■ Feature:

- 16 channel screen display.
- Support 16 servers or more.
- 2-way audio, PTZ camera control, relay control, search through recorded files. 24 hour

monitoring, recording

- Two-way audio support, camera Pan/Tilt/Zoom, preset/relay control, recorded file search, 24-hour monitoring & recording.

■ Cautions

Processor resource changes according to frame rate per channel. NVR program cannot be run normally if your system processor uses 100% resource. Select " I Frame Mode" to low your system resource.